

MONODISPERSE CORE/SHELL AND OTHER COMPLEX STRUCTURED
NANOCRYSTALS AND METHODS OF PREPARING THE SAME

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ABSTRACT

The present invention provides new compositions containing nearly monodisperse colloidal core/shell semiconductor nanocrystals with high photoluminescence quantum yields (PL QY), as well as other complex structured semiconductor nanocrystals. This invention also provides new synthetic methods 10 for preparing these nanocrystals, and new devices comprising these compositions. In addition to core/shell semiconductor nanocrystals, this patent application also provides complex semiconductor nanostructures, quantum shells, quantum wells, doped nanocrystals, and other multiple-shelled semiconductor nanocrystals.

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